

## **EE/CprE/SE 491 WEEKLY REPORT XY**

**4/4/22 – 4/11/22**

**Group number: sddec22-14**

**Project title: Machine Learning for Human Biometrics**

**Client &/Advisor: JR Spidell & Akhilesh Tyagi**

### **Team Members/Role:**

**Ritvik Maripally: Security Manager**

**Ron Mei Hang Teoh: Database Manager**

**Yee Shen Teoh: Hardware Manager**

**Zi-Jan Wong: Machine Learning Manager**

**Nathanael Morris: Machine Learning Manager**

#### ○ **Weekly Summary**

- *A few of us were familiarizing ourselves with some new environments that we're going to use, as well as starting to integrate certain parts of the system together and see if it would work.*

#### ○ **Past week accomplishments**

Yee Shen Teoh: Out travelling for a competition representing ISU.

Ron Mei Hang Teoh: Installed Anaconda and Jupyter Notebook, and familiarized with the environment

Zi-Jan Wong: Added a few lines of code to calculate root mean squared error (RMSE) of the model. The RMSE function basically takes in real and predicted x and y coordinates of the pupil, then checks how accurate the predicted values are compared to the real values. Tested the function with eye-0003-0000.avi only.

Ritvik Maripally: Not much besides more isolation research and database tweaking for security measures. Evaluating scenario

Nathanael Morris: Added more requirements to the REMoDNav algorithm and its interfaces, and ran a database through the algorithm to get eye movement classification outputs

#### ○ **Pending issues**

Yee Shen Teoh: N/A

Ron Mei Hang Teoh: N/A

Zi-Jan Wong: N/A

Ritvik Maripally: N/A

Nathanael Morris: N/A

#### ○ **Individual contributions**

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b> <i>(Quick list of contributions. This should be short.)</i>	<b><u>Hours this week</u></b>	<b><u>HOURS cumulative</u></b>
Ritvik Maripally	Evaluating cybersecurity scenarios and isolation method portion of project research	6	54
Ron Mei Hang Teoh	Installed Anaconda and Jupyter notebook and familiarized myself with the environment, and prepare to integrate influxdb with python.	6	54
Yee Shen Teoh	Good luck cheer in FL! :D	0	4
Zi-Jan Wong	Wrote code to calculate RMSE of the model	6	54
Nathanael Morris	Ran database through REMoDNaV algorithm, calculated eye movement classifications	6	54

○ **Comments and extended discussion**

N/A

○ **Plans for the upcoming week**

Yee Shen Teoh: Continue study projects on hackster.io and get familiar with Ultra96 hardware and its software environment.

Ron Mei Hang Teoh: Identify the libraries needed to integrate InfluxDB into the python environment.

Zi-Jan Wong: Get RMSE from all data fed to model and justify what they mean.

Ritvik Maripally: More evaluations, checking risk assessment for new portions

Nathanael Morris: Help Jan to get errors with data and figure out how to reduce the amount of error in the algorithm.

○ **Summary of weekly advisor meeting (if applicable/optional)**

N/A